

Claims

1. Air-lock valve (1), especially for a band processing- or coating plant, provided to close a gap-like opening (3), traversed by a flexible band substrate (4), between two different sections of a plant, featuring at least one moveable sealing body (7), cooperating with a sealing surface (5) for closing said opening (3), and eventually during the closing phase of said air-lock valve (1), said band substrate (4) is being clamped between said body (7) and said sealing surface (5), **characterized in that** said sealing surface (5) surrounds said opening (3) in a frame-like fashion, and with the object of closing opening (3), said body (7) may be pressed in such a fashion upon said sealing surface (5) and/or upon said band substrate (4) traversing said opening (3), that it closes said opening (3) at least through indirect abutting at the edges of said sealing surface (5).

2. Air-lock valve according to claim 1, **characterized in that** said band substrate (4) may be forced through said body (7) against a sealing edge of opening (3) and at said sealing surface (5), in the area of said sealing edge, a tangent produces an obtuse angle towards the longitudinal or traversing direction of said band substrate (B).

3. Air-lock valve according to claim 1 or 2, where at least said body (7), preferably also said sealing surface (5), feature an arcuate contour, and an existing radius of said sealing surface (5) is larger or equal to the radius of the arcuate surface, provided on said body (7), towards said sealing surface (5) or said band substrate (4).

4. Air-lock valve, according to claim 1,2 or 3, where said sealing surface (5) and/or said body (7) are provided with an elastically flexible surface material.

5. Air-lock valve according to any one of the preceding claims, whose sealing surface (5) consists of a plane, flexible material, being tightly united, especially glued, with a wall section, in frame-like fashion, in the area of the circumferential border of opening (3).

6. Air-lock valve according to any one of the preceding claims, where said body (7) is configured as a cylindrical roll.

7. Air-lock valve according to any one of the preceding claims, with body (7) being rotably mounted.

8. Air-lock valve according to any one of the preceding claims, with at least one housing (2), containing said opening (3), sealing surface (5) and body (7).

9. Air-lock valve, according to any one of the preceding claims, the body (7) of which, may be swayed between an inactive and a closed position, by means of a separate power drive.

10. Air-lock valve according to claim 9, where said separate power drive is equally provided at or inside said housing (2).

11. Air-lock valve according to any one of the preceding claims, where, by means of an accumulator, said body (7) may be firmly tightened on said sealing surface (5), with a predetermined bearing load.

12. Processing plant for traversing, band-like substrates, especially for flexible band substrates, with at least one evacuable processing chamber and at least another chamber, provided especially to unroll or wind up said band substrate, said chambers being interconnected through an opening, through which said band substrate may be guided, **characterized by at least one air-lock valve**, provided at said opening, according to one of the preceding claims.

13. Processing plant according to claim 12, in which said sealing body (7) of at least one air-lock valve and its respective sealing surface (5) are turned towards the additional chamber, to be occasionally ventilated.

S U M M A R Y

An air-lock valve (1), especially for a band processing plant, provided for closing a gap-like opening (3), traversed by a flexible band substrate (4), between two different plant sections, featuring at least one moveable sealing body (7), cooperating with a sealing surface (5), when it closes said opening (3), and eventually said band substrate (4) is being firmly mounted between said body (7) and sealing surface (5) during the closing operation of said air-lock valve (1), is characterized, **according to the invention**, in that the sealing surface (5) surrounds opening (3) in frame-like fashion, and in order to close opening (3), said body (7) may be pressed in such a fashion upon sealing surface (5) and/or upon band substrate (4), traversing said opening (3), that it obstructs said opening (3) at least due to indirect juxtaposition at the edges of said sealing surface (5).

[Fig. 1].